Lab4: Data types, Expressions, Programming

Date: 26-8-2025

Work in a separate directory named **Lab4**. You may use **gedit** & Editor (instead of **vi/nano)**.

Task1: Explore the provided L31_demos.c demo program, study each C construct, and document (In record) any constructs that are new to you.

Task2: Create a C program that illustrates type casting, providing clear examples for each case. Sample one or two case is given for your reference in type_casting.c.

Task3: Write a C program that determines the maximum height traveled (in m) by a ball thrown vertically upwards with certain initial velocity (in m). Also find the time (in sec) to reach the maximum height and the time to reach back to the thrower. Use g=10m/s²

a. Prompt the user to enter the initial velocity of the ball.

b. Find the maximum height reached.

c. Find the time to reach maximum height

 d. Find the total time to return back to the thrower

Example:

 Enter the initial velocity of the ball (in m): **20**

 The maximum height reached is 20 m

 The time required to reach the maximum height is 2 secs

 The total time to return back is 4 secs

Task 4:Create your own mathematical problem and write a C program to solve it.